

WEST Search History

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9/9/03
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DATE: Tuesday, September 09, 2003

Set Name Query side by side

DB=PGPB; PLUR=YES; OP=AND

L1 20020034498

1 L1

DB=USPT; PLUR=YES; OP=AND

L2 antibiotic near5 (lipid or protein or
polypeptide or peptide)

3793 L2

L3 antibiotic near2 (lipid or protein or
polypeptide or peptide)

1916 L3

L4 L3 same bacterial

243 L4

L5 L4 and candida\$

106 L5

L6 L3 same candida\$

16 L6

L7 antibiotic\$.ti. and (lipid or protein or
polypeptide or peptide).ti.

51 L7

L7 and (vaginalis or candida or albicans or

L8 peptostreptococcus or trichophyton or (gram
near2 negative))

46 L8

END OF SEARCH HISTORY

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L4: Entry 2 of 243

File: USPT

Aug 5, 2003

DOCUMENT-IDENTIFIER: US 6602500 B1

TITLE: Paenibacillus polymyxa strain ATCC 202127 for biocontrol of bacteria and fungi

Brief Summary Text (11):

The present invention relates to a novel strain of bacteria, referred to herein as PKB1, which has an inhibitory affect on fungi such as L. maculans and S. sclerotiorum. The present invention also relates to the antibiotic isolated from the bacterial strain PKB1, referred to herein as the PKB1 antibiotic, and the peptides of the antibiotic, referred to herein as the PKB1 peptides, which provide the inhibitory affect against fungi. The bacteria, antibiotic and peptides of the present invention can be used as pesticides and biocontrol agents against disease-causing fungi, for example, in crop plants.

Detailed Description Text (2):

The present invention relates to a novel strain of bacteria, referred to herein as PKB1, which has an inhibitory affect on fungi such as L. maculans and S. sclerotiorum. The present invention also relates to the antibiotic isolated from the bacterial strain PKB1, referred to herein as the PKB1 antibiotic, and the peptides of the antibiotic, referred to herein as the PKB1 peptides, which provide the inhibitory affect against fungi. The bacteria, antibiotic and peptides of the present invention can be used as pesticides and biocontrol agents against disease-causing fungi, for example, in crop plants.

Detailed Description Text (3):

The bacterial strain PKB1, which is a Paenibacillus polymyxa, has been deposited with the American Type Culture Collection (ATCC), Manassas, Va., on May 18, 1998 and assigned Accession Number 202127. The antibiotic extracted from the bacteria is a peptide antibiotic including primarily two cyclic peptides of eight amino acids each. The sequence of one of the peptides is shown in FIG. 6B. The peptides or bioactive fragments thereof according to the invention have inhibitory affect against disease-causing fungi.

Detailed Description Text (11):

Another aspect of the invention pertains to isolated PKB1 antibiotic and peptides or bioactive fragments or portions thereof. An "isolated" or "purified" antibiotic or peptide or bioactive fragments thereof is substantially free of cellular material when produced by extraction from a bacterial system, or chemical precursors or other chemicals when chemically synthesized. The language "substantially free of cellular material" includes preparations of PKB1 peptide in which the antibiotic or peptide is separated from cellular components of the bacteria, or in particular, the bacterial spores on which it is produced. In one embodiment, the language "substantially free of cellular material" includes preparations having less than about 30% (by dry weight) of non-PKB1 peptides or protein (also referred to herein as contaminating protein), more preferably less than 20% (by dry weight) of non-PKB1 peptides or protein, still more preferably less than about 10% (by dry weight) of non-PKB1 peptides or protein and most preferably less than about 5% (by dry weight) of

non-PKB1 peptides or protein. The language "substantially free of chemical precursors or other chemicals" includes preparations of PKB1 peptides in which the peptides are separated from chemical precursors or other chemicals which are involved in the synthesis of the peptides. In one embodiment, the language "substantially free of chemical precursors or other chemicals" includes preparations having less than about 30% (by dry weight) of chemical precursors or non-PKB1 chemicals, more preferably less than 20% (by dry weight) of chemical precursors or non-PKB1 chemicals, still more preferably less than about 10% (by dry weight) of chemical precursors or non-PKB1 chemicals and most preferably less than about 5% (by dry weight) of chemical precursors or non-PKB1 chemicals. In preferred embodiments, isolated PKB1 antibiotic or peptides or bioactive fragments thereof are free of contaminating proteins from the same bacteria from which the antibiotic or peptides are derived. Typically, such antibiotic and peptides are produced by extraction from the bacteria which produces them.

Detailed Description Text (20):

PKB1 antibiotic and peptides are preferably produced by extraction from bacterial strain PKB1. The extraction procedure includes treating the spores of the bacterium with a solvent of medium polarity of, for example, between 5.5 to 7.5 using the nine point scale of N. Godfrey (Solvent selection via miscibility number, Chemtech pp 359-363, 1972). The extraction is preferably carried out with methanol or acetic acid. Alternately, the peptides of the present invention can be produced recombinantly or by chemical synthesis.

Detailed Description Text (23):

The bacterial strain, antibiotic and peptides of the present invention can be used as a pesticide against some bacteria and fungi.

Detailed Description Text (26):

The bacterial strain, antibiotic and peptides of the present invention can be applied as a pesticide in any desired way. In one embodiment, the bacterial strain, antibiotic and peptides are applied in a carrier to facilitate application and to reduce crop maintenance time. In particular, in one embodiment, the PKB1 bacterial strain is cultured in compost and applied to a crop with the compost.

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L6: Entry 7 of 16

File: USPT

Sep 24, 2002

DOCUMENT-IDENTIFIER: US 6455248 B1

TITLE: Reagents and kits for detecting fungal pathogens in a biological sample

Drawing Description Text (5):

FIG. 4. Comparison of protein sequences within the amino acid activation domain of peptide antibiotic synthetases from *Penicillium chrysogenum* (ACVT, ACVS), *Aspergillus nidulans* (ACVS) *Cephalosporium acremonium* (ACVS), *Nocardia lactamdurans* (ACVS), *Bacillus brevis* with deduced Lys2p sequence from *Candida albicans* and *Saccharomyces cerevisiae*. The identical residues are boxed and shaded. Dots indicate gaps introduced to maximize alignment. The core sequences (1-6) of the six domains of peptide synthetases are shown below the compared sequences. Residues common to ACV synthetases and LYS2p sequence is shown with an asterisk.

Other Reference Publication (34):

Suvarna, et al., "Molecular Analysis of the LYS2 Gene of *Candida albicans*: Homology to Peptide Antibiotic Synthetases and Regulation of the Alpha-amino adipate Reductase," *Current Genetics*, (Apr. 1998), vol. 33, pp., 268-275.